

Thirty-five longitudinal series of scales round the trunk; sixty transverse series between the fore and hind limbs. Ten præanals, scarcely larger than the neighbouring scales. Subcaudal scales scarcely larger than those on the back of the tail.

Limbs somewhat feeble; the fore legs extend to the eye when stretched forwards, the hind legs not quite halfway up towards the axil. The third and fourth fingers equal in length, but longer than the second. The third hind toe a little shorter than the fourth and a little longer than the fifth.

Upper and lateral parts blackish brown, with irregular bluish-white, band-like transverse spots, one or two scales broad. Tail and legs without such bands. Lower parts uniform white.

The specimen is $6\frac{1}{2}$ inches long to the vent, the greater part of the tail being lost.

	in.	lin.
Distance of the snout from the eye	0	5
" " ear	1	2
" " axil	2	2
" " vent	6	6
Length of fore limb	1	$4\frac{1}{2}$
" third finger	0	$3\frac{2}{3}$
" hind limb	2	0
" second toe	0	4
" third toe	0	6
" fourth toe	0	$6\frac{1}{2}$
" fifth toe	0	5

LII.—*Dredging-Excursion to Iceland in June and July 1872.*

By T. A. VERKRÜZEN.

HAVING relinquished my first idea of paying a second visit to Norway, where I had had an excursion last year of so much interest, I left London about the middle of June for Granton Harbour, Edinburgh, and went thence by the steamer 'Queen' to Reykjavik, where we arrived after a voyage of about ninety-five hours—perhaps the quickest passage made there, the wind being all the time in our favour. I stayed a month in the island, had a ride to the Geyser, besides several shorter excursions, and employed the remainder of my time in dredging and exploring the shores of the Bay of Reykjavik. I had considerable difficulty in obtaining good boatmen, the Icelanders not being accustomed to the labour of dredging, and tiring after a few hours of exertion. All circumstances considered, however, I managed, by good pay &c., to get my dredging done tolerably well; and encouraged by a friend to communicate the result

of my labours to the conchological world, I now have much pleasure in doing so, trusting it may prove of some interest. I returned from Reykjavik towards the end of July, when our voyage back to Granton Harbour was performed in about five days and five nights, and took consequently nearly a day and a night longer than the outward passage. I much regretted my want of opportunity to visit likewise the more important northern part of that most interesting island, but should be happy to do so under favourable circumstances, as no doubt there we should meet with a decided, and perhaps highly interesting, arctic fauna.

My shells have been kindly verified by J. Gwyn Jeffreys, Esq., F.R.S., &c., who has obligingly assisted me in determining the species which had hitherto not come under my notice.

List of Mollusca

dredged and collected in the Bay of Reykjavik, Faxa Fjörður, Iceland, in 20 to 36 fathoms (ground mostly stony with sea-plants, in parts muddy sandy), in July 1872, by T. A. Verkrüzen.

1. *Anomia ephippium*, Linné. Small; from between roots of sea-plants.
2. ———, var. *squamula*, L. Small; from leaves of sea-plants.
3. *Pecten islandicus*, Müller. Not plentiful, and difficult to obtain.
4. *Mytilus edulis*, L. Abundant and common.
5. — *modiolus*, L. Rather plentiful; occasionally very large.
6. ———, var. *ovata*, Jeffreys. Now and then met with.
7. *Modiolaria corrugata*, Stimpson. The young plentiful, adults rare.
8. — *discors*, var. *semilævis*, Jeffr. (*lævigata*, Gray). A fine live specimen, though it got crushed in the dredge.
9. *Crenella decussata*, Montagu (*cicercula*, Möller). Abundant.
10. *Nucula tenuis*, Mont. Only five young specimens obtained.
11. *Leda pernula*, Müll. Moderately plentiful; large specimens and adults rarer.
12. *Axinus flexuosus*, Mont. Sparingly.
13. ———, var. *Gouldii*, Philippi. More plentiful.
14. *Cardium echinatum*, L. Rather scarce; adults of a thinner texture and smaller than British specimens.
15. — *fasciatum*, Mont. Not common.
16. — *islandicum*, L. Young and middle sizes pretty numerous, adults scarce.
17. — *grönlandicum*, Chemnitz. Young and middle sizes pretty numerous, adults scarce.
18. *Cyprina islandica*, L. Not common in the bay.
19. *Astarte sulcata*, DaCosta, var. *elliptica*, Brown. Rather scarce; some approach the American variety of *undata*, Gould.

20. *Astarte compressa*, Mont. Abundant.
21. — *borealis*, Ch. (*arctica*, Gray). Rather plentiful, though much scarcer than the last.
22. *Tellina calcaria*, Ch. Young and middle sizes abundant, fine adult specimens scarce.
23. *Maetra solida*, L. Scarce.
24. — —, var. *elliptica*, Brown. Similar to the last; a few more of these.
25. *Scrobicularia nitida*, Müll. Pretty abundant.
26. — *prismatica*, Mont. A few amongst the last.
27. *Thracia truncata*, Br. About half a dozen obtained.
28. *Mya truncata*, L. Plenty of young, the adults only in odd valves.
29. *Saxicava rugosa*, L. Not common.
30. — —, var. *arctica*, L. A few among the last.
31. *Dentalium striolatum*, St. A few only obtained.
32. — *entalis*, L., var. *infundibulum*, Léc. One dead specimen.
33. *Chiton albus*, L. Rather abundant.
34. — *ruber* (Lowe), L. Middling plentiful.
35. — *marmoreus*, Fabricius. Not scarce.
36. *Helcion pellucidum*, L. A few only obtained.
37. *Tectura testudinalis*, Müll. Plentiful and fine, my largest measuring about $1\frac{1}{4}$ inch (nearly 30 millims.) long.
38. — —, var. *pallida*, Verkrüzen. Colour white, all but the centre or dorsal scar, sometimes exhibiting a clouded wreath of a reddish-brown colour, or other ornamentation, in the inside, with a white margin, and sometimes a plain colouring, but *without* the longitudinal rays of the typical species. This variety also occurs in Norway; I am not aware whether it is likewise met with on the north British coasts; not finding it named, I have proposed the above designation for it.
39. — *virginea*, Müll. Rather plentiful.
40. — —, var. *lactea*, Jeffreys. A few specimens.
41. *Lepeta caeca*, Müll. Not common. Rather a small form; the apex sharp and prominent.
42. *Punctura noachina*, L. Only two specimens, and a fragment of a third.
43. *Trochus tumidus*, Mont. Rather abundant.
44. — *grönlandicus*, Ch. Of a fine rose colour, very beautiful; scarce.
45. — *helicinus*, Fabr. Only one specimen got.
46. — *cinereus*, Couthouy. One dead specimen, in good preservation.
47. *Mölleria* (Jeffr.) *costulata*, Möll. Rather scarce; mostly dead shells, a few with operculum.
48. *Lacuna divaricata*, Fabr. Pretty abundant.
49. — —, var. *canalis*, Mont. Similar to last.
50. *Littorina obtusata*, L., var. *palliata*, Say (= *limata*, Lovén). Common colours. Plentiful on sea-plants on the Eider-Duck Island in the bay.
— —, var. 1, darkest olive (nearly black). Abundant.

Littorina obtusata, var. 2, middle olive. Similar to last.

— —, var. 3, light olive. Not quite so plentiful.

— —, var. 4, yellow. Scarce.

The olive varieties have purple or plum-coloured throats; the yellow varieties have yellow throats.

— —, var. 5, banded, various colours. Not common.

— —, var. 6, chequered. Similar to the last.

— —, var. 7, mottled. More plentiful among the common colours, though prettily mottled or clouded specimens are scarce.

51. — — *rudis*, Maton. Common colours. Abundant.

— —, var. 1, grey. Less common, especially fine examples.

— —, var. 2, white, brown throats. Plentiful, though fine specimens rather rarer.

— —, var. 3, cream, orange throats. Rather scarce.

— —, var. 4, red. Now and then occurring.

— —, var. 5, ribbed. Same as the last, amongst any of the varieties and type.

— —, var. 6, grey-and-white banded. Plentiful; fine specimens scarcer.

— —, var. 7, coloured-banded. Not frequently occurring.

— —, var. 8, chequered. Not frequently occurring.

— —, var. 9, mottled. Not frequently occurring.

52. *Rissoa striata*, J. Adams. Perhaps about two dozen obtained, mostly dead shells.

53. *Skenea planorbis*, Fabr. Two specimens.

54. *Odostomia insculpta*, Mont. Fewer than *Rissoa striata*.

55. — — *unidentata*, Mont. Only one obtained, a dead shell.

56. *Natica islandica*, Gmelin. A few only (dead shells) washed on shore.

57. — — *grönlandica* (Beck), Möll. Young and middle sizes pretty plentiful, adults scarce.

58. — — *affinis*, Gm. (*clausa*, Sowerby). Similar to the last, perhaps rather scarcer.

59. *Velutina levigata*, Pennant. A few only obtained.

60. *Trichotropis borealis*, Broderip & Sowerby. Like the last; some fine specimens.

61. *Admete viridula*, Fabr. About twenty dredged; mostly fine specimens, my largest about 17 millims. long and 9 wide.

62. *Aporrhais pes-pelecani*, L. A fragment (the spire) of one adult, and four young.

63. *Purpura lapillus*, L. Common colours, plain. Very abundant on piers and rocks.

64. — —, var. 1, orange-colour. Occasionally met with among the last.

65. — —, var. 2, banded. Same as last.

66. — —, var. 3, ribbed. Occasionally amongst any of the preceding.

67. — —, var. 4, *imbricata*, Lamarck. Rare, especially the fine specimens.

68. *Buccinum undatum*, L. Shape similar to British; spire rather longer in proportion, waves and spiral ribs rather coarse and strongly produced. All of these were dredged in deep water.
69. ———, var. *planum*, Verkr. Shape conical, spire shorter than in typical form; mouth proportionally longer; whorls flatter; suture shallow; waves slight and disappearing on last whorl, sometimes on the two or three last; spiral ribs indistinct, except on intermediate forms; texture thin and more brittle, plain; colour a purplish olive-grey, with dark purplish-brown throat, the intermediate forms generally of a lighter hue. This variety occurred in one to four feet water at lowest ebb-tide, near the shore; none of these were dredged in deep water.
70. *Trophon truncatus*, Ström. Rather scarce.
71. ——— *clathratus*, L. Similar to the last, though more frequently met with.
72. ———, var. *Gunneri*, Lov. This form occurs perhaps the most of the three, though all are rather scarce.
73. *Fusus despectus*, L., var. *tornata*, Gould. Only three dredged.
74. *Pleurotoma turricula*, Mont. Not common; fine specimens; my largest 21 millims. (nearly $\frac{7}{8}$ inch) long, and 11 millims. (nearly $\frac{1}{2}$ inch) wide.
75. ——— *Trevelyana*, Turton. A few only obtained.
76. ——— *pyramidalis*, Str. More frequent, still rather scarce; fine specimens rare.
77. ——— *violacea*, Mighels & C. B. Adams. Young rather plentiful, the older ones not frequent.
78. ——— *bicarinata*, Couthouy. About half a dozen young shells got, mostly dead.
79. *Utriculus Gouldii*, Couthouy. Pretty plentiful, though mostly dead shells.
80. ——— *hyalinus*, Turton. Only three specimens obtained.
81. *Actæon tornatilis*, L. One young dead specimen.
82. *Philine scabra*, Müll. A few specimens only.
83. *Doris bilamellata*, L. Four pretty specimens from under a stone at low water.

Conspicuous by their absence in the places where I dredged and collected were:—Brachiopoda, *Pecten* (except *islandicus*), *Lucina borealis*, *Cardium edule*, *Dentalium entalis* and others, *Patella vulgata*, *Littorina littorea*, and other species so frequently met with in Norway and on other northern coasts, though I doubt not but some of them will occur in other parts of Iceland.

Should any one have a wish to inspect my Icelandic collection, I shall be happy to show the same on receiving a previous intimation, for the purpose of arranging the time.

The following circumstance may, I trust, not be without interest to collecting conchologists. One morning the boy I had engaged brought me several *Patella*, which genus I had not met with near Reykjavik, and one thick *Purpura lapillus*,

different from those I had found in great numbers. He spoke but very little Danish, and it was with difficulty I got to understand from him that he had obtained them from a ship. Going there with him, I saw them unloading sand brought as ballast from Great Britain. It was fortunate I found this out, as I might otherwise have taken them for Icelandic shells from a different part of the island. This is one more instance showing how shells may be transported to countries where they do not occur in a living state, thus causing errors against which conchologists cannot be too much on their guard.

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LIII.—*On the Structure of the Echinoidea.* By S. LOVÉN.

[Continued from p. 298.]

THE explanation just given of the development and changes of the ambulacra in the Latistellæ shows that during the growth of the *Echinus* the primary plates of both rows, as if borne by a slowly flowing stream, are in motion from the point near the eye-plates where they make their appearance, as from its source, down towards the peristome. There the auricles meet, which belong to the masticatory apparatus, not to the corona, with their bases firmly attached to the inside of the oldest plates. It is by their resistance that, in the Latistellæ, the peristome becomes the fixed boundary of the corona towards the buccal membrane, and that, during their growth and the simultaneous downward pressure of the primary plates, the pressure originates of which the consequences are the regular displacement, shifting, and firm coalescence of the plates, which renders the position of the pores apparently confused.

The Angustistellæ, or Cidaridæ, present different conditions. In them all the primary plates of the ambulacra are entire plates, continue so always, and distinctly separated from each other by sutures, which are not effaced by any coalescence. They are consequently throughout life like the primary plates in the young of the Latistellæ in their first foundation, and form a narrow, single, and uninterrupted sequence, of nearly the same width, which descends gradually in the direction of the margin of the corona, between the margins of the large interradial plates, with regular flexures, which are not original curves, but determined by the margins of the interradial plates. There the bases of the auricles present no resistance; they remain entirely upon the interradia, by the side of the track of the ambulacra, which they leave so open that there is no